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CLAIMS

What is claimed is:

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1. A method of transforming a digital subscriber loop signal, comprising:
providing the digital subscriber loop signal; and
increasing a gain of the digital subscriber loop signal with a digital subscriber loop repeater.
 2. The method of claim 1, wherein increasing the gain of the digital subscriber loop signal includes increasing the gain of the digital subscriber loop signal with an asymmetrical digital subscriber loop repeater.
 3. The method of claim 1, wherein increasing the gain of the digital subscriber loop signal includes transforming the digital subscriber loop signal with an amplifier.
 4. The method of claim 3, wherein increasing the gain of the digital subscriber loop signal includes passing the digital subscriber loop signal through a pass filter.
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 5. The method of claim 1, further comprising processing the digital subscriber loop signal with an echo cancellation filter.
 6. The method of claim 1, further comprising frequency division duplexing
 7. The method of claim 6, wherein frequency division duplexing includes passing the digital subscriber loop signal through a low pass filter after increasing the gain of the digital subscriber loop signal.
 8. A digital subscriber loop repeater for performing the method of claim 1.

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9. The method of claim 1, further comprising remotely fine-tuning the digital subscriber loop repeater using control signals sent to the digital subscriber loop repeater.
10. The method of claim 1, further comprising remotely reconfiguring the digital subscriber loop repeater using control signals sent to the digital subscriber loop repeater.
11. The method of claim 1, further comprising querying the digital subscriber loop repeater for a purpose selected from the group consisting of controlling the operation of the digital subscriber loop repeater and determining the status of the digital subscriber loop repeater.
12. The method of claim 11, wherein controlling the operation of the digital subscriber loop repeater includes provisioning the digital subscriber loop repeater with an operational mode selected from the group consisting of normal, no-ADSL-repeater with coils in circuit, and no-ADSL-repeater with coils out of circuit.
13. The method of claim 11, wherein querying the digital subscriber loop repeater includes maintaining the digital subscriber loop repeater by causing the digital subscriber loop repeater to enter into a loop-back state.
14. A digital subscriber loop repeater, comprising:
an amplifier.
15. The digital subscriber loop repeater of claim 14, wherein said digital subscriber loop repeater includes an asymmetric digital subscriber loop repeater.
16. The digital subscriber loop repeater of claim 14, further comprising a pass filter coupled to an input of the amplifier.

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17. The digital subscriber loop repeater of claim 16, further comprising a pass filter coupled to an output of the amplifier.
 18. The digital subscriber loop repeater of claim 16, further comprising an upstream amplifier.
 19. The digital subscriber loop repeater of claim 18, further comprising a band pass filter coupled to an input of the upstream amplifier.
 20. The digital subscriber loop repeater of claim 19, further comprising a band pass filter coupled to an output of the upstream amplifier.
 21. A digital subscriber loop, comprising the digital subscriber loop repeater of claim 14.
 22. A method for operating a digital subscriber loop which comprises utilizing the digital subscriber loop repeater of claim 14.
 - Sub A2* 23. A kit comprising the digital subscriber loop repeater of claim 14.
 24. The digital subscriber loop repeater of claim 14, further comprising a power connection coupled to the amplifier.
 25. The digital subscriber loop repeater of claim 14, further comprising a control information connection coupled to the amplifier.
 26. A digital subscriber loop, comprising:
a digital subscriber loop repeater.

27. The digital subscriber loop of claim 26, wherein said digital subscriber loop includes an asymmetric digital subscriber loop and said digital subscriber loop repeater includes an asymmetric digital subscriber loop repeater.

28. The digital subscriber loop of claim 26, wherein said digital subscriber loop repeater includes an amplifier.

29. The digital subscriber loop of claim 28, wherein the digital subscriber loop repeater includes a pass filter coupled to an input of the amplifier.

30. The digital subscriber loop of claim 29, wherein the digital subscriber loop repeater includes a pass filter coupled to an output of the amplifier.

31. The digital subscriber loop of claim 28, wherein the digital subscriber loop repeater includes an upstream amplifier.

32. The digital subscriber loop of claim 31, wherein the digital subscriber loop repeater includes a band pass filter coupled to an input of the upstream amplifier.

33. The digital subscriber loop of claim 32, wherein the digital subscriber loop repeater includes a band pass filter coupled to an output of the upstream amplifier.

34. The digital subscriber loop of claim 26, further comprising an echo cancellation filter coupled to the digital subscriber loop repeater.

35. The digital subscriber loop of claim 26, further comprising a low pass filter coupled to the digital subscriber loop repeater and a high pass filter coupled to the digital subscriber loop repeater.

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